R E M A R K S

The features of claim 3 were added to claim 1.

Claim 4 was amended to correct a minor clerical error.

New claim 23 recites a feature of previously presented claim 8.

With respect to Item No. 3 on page 2 of the Office Action, withdrawn claims 14 to 21 were canceled hereinabove. Applicants reserve their rights to file a Divisional application directed to said withdrawn claims.

Concerning Item No. 5 at the bottom of page 2 of the Office Action, submitted concomitantly herewith is an English-language translation of applicants' Japanese priority application 2001-251048, along with a DECLARATION OF ACCURACY OF TRANSLATION of Mr. Hiroya Yano dated June 10, 2004.

The presently claimed invention concerns a bacterial composition that has a bactericidal effect against food poisoning bacteria. The composition comprises (a) 0.05 mM or more to 1.5 mM of ethylenediaminetetraacetic ("EDTA") acid or a sodium salt thereof and (b) 1 μg/mL to 150 μg/Ml of an alpha-type thionin or a beta-type thionin.

Claims 1, 3 to 13 and 22 were rejected under 35 USC 103 as being obvious over Oita (USP 6,329,011) in view of Wilhoit (USP 5,573,800) for the reasons set forth in Item Nos. 6 and 7 on pages 3 and 4 of the Office Action.

It was admitted at the top of page 4 of the previous Office Action of September 25, 2003 that Oita differs from the instant claimed invention because EDTA and EDTA salts are not part of the claimed composition of Oita. It was admitted at the middle of page 3 of the April 21, 2004 Office Action that Oita does not teach a combination of thionin and an EDTA metal salt.

Oita (USP 6,329,011) relates to an antimicrobial agent containing thionin as an effective ingredient. However, Oita discloses merely that thionin is effective only with respect to *Alicyclobacillus acidoterrestris*, which is an acid-resistant and heat-resistant bacteria contained in fruit juice. Accordingly, Oita does not teach combining thionin with any other compound and using it as an antimicrobial agent. Thus, Oita does not teach or suggest combining thionin and EDTA in a composition as claimed by the applicants.

The underlined portion of the following statement in the third paragraph on page 3 of the April 21, 2004 Office Action is

submitted to be incorrect for the reasons that follow such statement:

> "Oita, S. teach a antimicrobial (inherently bactericidal) compositions consisting essentially of alpha or beta thionin ranging from 1 μg/ml to 100 μg/ml in combination with the antimicrobial peptide of nisin at column 2, line 64-column 3, line 5 (also see Example I, Table 1)."

In Oita, thionin is the only effective ingredient that is disclosed. Column 2, line 64 to column 3, line 5 of Oita, Example I of Oita and Table I of Oita describe only thionin by itself. Nisin is not disclosed in Oita. Apparently, the Examiner mistook the content of Oita for that of Wilholt et al.

Wilholt et al. (USP 5,573,800) relate to an antimicrobial composition comprising a combination of nisin or pediocin and Na_2EDTA. However, what is specifically disclosed in the Examples in Wilholt et al. is an effect with respect to a *Listeria* bacteria, which is a pathogenic bacteria. Nisin is an antimicrobial peptide derived from bacteria. Accordingly, nisin is clearly distinguished from thionin which is derived from wheat.

On page 3, lines 14 to 16 of the April 21, 2004 Office Action, the following was stated:

> "Wilholt, D.L. et al. teach bactericidal compositions consisting essentially of 0.8 wt.% Na_2EDTA at column 18, lines 30-46."

In the above quoted excerpt from the April 21, 2004 Office Action, only Na_2EDTA was indicated as an essential composition, however, Wilholt et al. disclose a combination of nisin and Na_2EDTA.

The antimicrobial agents described in both of the above references are substantially different from each other in combatting their objective harmful bacteria. The former uses thionin only and no teaching is found therein with regard to a combination with other compounds. The latter indicates only the combined use of an antimicrobial peptide derived from a bacteria and Na_2EDTA. Therefore it is respectfully submitted that one of ordinary skill in the art would not arrive at a combination of thionin and EDTA from the references and obtain a finding that said combination is effective for sterilizing food poisoning bacteria.

The bactericidal composition of the present invention has a remarkable antibactericidal activity as shown in Table 1 on page 12 of the present specification, Fig. 1 and page 7, last paragraph, against food poisoning bacteria such as *Salmonella typhimurium*, *Escherichia coli* and *Vibrio parahaemolyticus*.

Table 1 on page 12 of the present specification is reproduced hereinbelow.

Table 1

Strain		MIC	MBC	
		Thionin*1 (μg/mL)	EDTA-2Na (mM)	Thionin+ EDTA-2Na*2
Salmonella typhimurium	JCM 6977	30	20	1
Salmonella enteritidis	IFO 3313	100<	50<	1
Escherichia coli O1:K1:H7	JCM 1649	100<	50	10
Escherichia coli O6	JCM 5491	100	10	1
Vibrio parahaemolyticus	IFO 12711	20	1	0.1
Bacillus cereus	JCM 2152	100	0.5	0.02
Bacillus cereus	IFO 15305	100<	0.2	0.05

*1 Alpha-type thionin of wheat

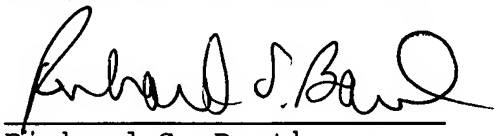
*2 MBC (mM) of EDTA-2Na in the coexistence of 10 μg/mL of wheat alpha-type thionin

It is therefore respectfully submitted that applicants' claimed invention is not rendered obvious over the references, either singly or combined in the manner relied upon in the Office Action, in view of the many distinctions discussed hereinabove. It is furthermore submitted that there are no teachings in the references to combine them in the manner relied upon in the Office Action.

Reconsideration is requested. Allowance is solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,



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Encs.: English-language translation of JP 2001-251048, along with a DECLARATION OF ACCURACY OF TRANSLATION of Mr. Hiroya Yano dated June 10, 2004